

## **Multiscale simulation and quantum computing for the design of new materials**

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Abstract:

The design of new materials and chemicals is a challenging task. The lab work for synthesizing and analyzing potential candidates is time- and cost-intensive. Simulation can help predict properties of substances but is difficult to perform due to different effects to be considered on varying length scales and the involvement of quantum mechanics which is notoriously difficult to calculate using conventional computers. In the talk I will shortly introduce HQS Quantum Simulations and briefly describe the concept of multiscale simulation, how the quantum computer fits into this picture and how we intent to find applications for quantum computers as early as possible.